

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application. Added text is indicated by underlining, deleted text is indicated by ~~striketrough~~. Changes are identified by a change bar at the left edge of text.

Listing of Claims:

Claims 1-22 (canceled)

23. (currently amended) A storage system comprising:

a first I/O port for connection to a communication network;

at least a second I/O port separate from the first I/O port for connection to the

communication network, the first and second I/O ports each receiving write requests;

an array of media for storing information, the array comprising a plurality of disk storage units organized into a plurality of logical disks;

a plurality of data paths, each data path being selectively connectable between any one of the logical disks and any one of the I/O ports;

a configuration table that identifies the logical disks for connection with the I/O ports;

an allocator to allocate one of the data paths between one of the logical disks and one of the I/O ports based upon a data rate capability of said one data path determined from communication speed information of the configuration table to thereby provide a desired quality of service;

wherein the allocated data path is selected in response to a request for the desired quality of service with respect to a communication link over the communication network, such that the allocated data path includes a logical disk and I/O port with sufficient data speed to satisfy the desired quality of service and thereby comprise a guaranteed quality of service data path, if such a guaranteed quality of service data path is available, and otherwise the allocated data path includes a logical disk and I/O port not comprising a guaranteed quality of service data path while having available resources sufficient to satisfy the desired quality of service.

1 24. (previously presented) A storage system as in claim 23 wherein the array of
2 media includes media having different operational characteristics, and wherein the storage
3 system allocates individual ones of the array of media to individual ones of the data paths to
4 provide the desired quality of service.

1 25. (canceled)

1 26. (previously presented) A storage system as in claim 24 wherein the array of
2 media comprise hard disk drives, and the different operational characteristics comprise different
3 communication speeds of operation.

1 27. (previously presented) A storage system as in claim 24 wherein the storage
2 system allocates ones of the array of media based upon a data rate capability of the media and a
3 data rate capability of a communication link coupled to one of the data paths.

1 28. (previously presented) A storage system as in claim 24 wherein the desired
2 quality of service comprises a specified bandwidth and wherein the storage system allocates
3 individual ones of the array of media based upon a guaranteed bandwidth.

1 29. (currently amended) A storage system comprising:
2 an array of storage media;
3 at least a first I/O port and a second I/O port separate from the first I/O port, each
4 having a network connection operable to connect the array to a network with a desired quality of
5 service;
6 a configuration table that identifies logical disks of the array for connection with
7 the I/O ports;
8 a plurality of data paths to selectively couple the I/O ports to the storage media,
9 wherein a data path between one or more of the array of storage media and the network
10 connection is selected in accordance with data rate capability determined from communication
11 speed information of the configuration table to provide the desired quality of service;

12 wherein the data path is selected in response to a request for the desired quality of
13 service with respect to a communication link over the network connection, such that the selected
14 data path includes a logical disk and I/O port with sufficient data speed to satisfy the desired
15 quality of service and thereby comprise a guaranteed quality of service data path, if such a
16 guaranteed quality of service data path is available, and otherwise the selected data path includes
17 a logical disk and I/O port not comprising a guaranteed quality of service data path while having
18 available resources sufficient to satisfy the desired quality of service.

1 30. (currently amended) A method for allocating resources in a storage system,
2 the storage system comprising a first of I/O port and a second I/O port separate from the first I/O
3 port and an array of storage devices coupled to a network connection by data paths, the method
4 comprising:

5 establishing a data path between a storage device of the array and one of the I/O
6 ports, wherein said one of the I/O ports is coupled to the network connection; the data path being
7 selected in accordance with data rate capability determined from communication speed
8 information from a configuration table that identifies logical disks of the array for connection
9 with the I/O ports to provide a desired quality of service; and wherein the data path is selected in
10 response to a request for the desired quality of service with respect to a communication link over
11 the network connection, such that the selected data path includes a logical disk and I/O port with
12 sufficient data speed to satisfy the desired quality of service and thereby comprise a guaranteed
13 quality of service data path, if such a guaranteed quality of service data path is available, and
14 otherwise the selected data path includes a logical disk and I/O port not comprising a guaranteed
15 quality of service data path while having available resources sufficient to satisfy the desired
16 quality of service .

1 31. (previously presented) The method of claim 30 wherein the step of
2 establishing the data path comprises assigning a data path having a sufficient data speed to
3 accommodate the desired quality of service.

1 32. (previously presented) The method of claim 30 wherein the step of
2 establishing a data path comprises searching for unallocated data communications resources to
3 accommodate a data capacity of the array.

1 33. (previously presented) The method of claim 37, wherein the step of selecting
2 ones of the array comprises searching for unallocated ones of the array having a sufficient data
3 capacity to match a data rate capability of the network connection.

1 34. (previously presented) A storage system as in claim 23 wherein the
2 configuration table includes information relating to data rate capability of the I/O ports and the
3 logical disks.

1 35. (previously presented) A storage system as in claim 29 wherein the
2 configuration table includes information relating to data rate capability of the I/O ports and the
3 array of storage media.

1 36. (previously presented) The method of claim 30 wherein the configuration
2 table includes information relating to data rate capability of the I/O ports and the array of storage
3 devices.

1 37. (previously presented) The method of claim 30, further comprising:
2 selecting a storage device of the array based upon data capacity of the storage
3 device and data rate capability of the network connection.

1 38. (previously presented) A storage system as in claim 23, wherein the allocator
2 further allocates the data path by assigning a data path having a sufficient data speed to
3 accommodate the desired quality of service.

1 39. (previously presented) A storage system as in claim 23, wherein the allocator
2 further allocates the data path by searching for unallocated data communications resources to
3 accommodate a data capacity of the array.

1 40. (previously presented) A storage system as in claim 23, wherein the allocator
2 further allocates the data path by selecting a storage device of the array based upon data capacity
3 of the storage device and data rate capability of the network connection.

1 41. (previously presented) A storage system as in claim 40, wherein the allocator
2 selects ones of the array by searching for unallocated ones of the array having a sufficient data
3 capacity to match a data rate capability of the network connection.

1 42. (previously presented) A storage system as in claim 29, wherein the array of
2 media includes media having different operational characteristics, and wherein the storage
3 system allocates individual ones of the array of media to individual ones of the data paths to
4 provide the desired quality of service.

1 43. (previously presented) A storage system as in claim 29, wherein the array of
2 media comprise hard disk drives, and the different operational characteristics comprise different
3 communication speeds of operation.

1 44. (previously presented) A storage system as in claim 29, wherein the storage
2 system allocates ones of the array of media based upon a data rate capability of the media and a
3 data rate capability of a communication link coupled to one of the data paths.

1 45. (previously presented) A storage system as in claim 29, wherein the desired
2 quality of service comprises a specified bandwidth and wherein the storage system allocates
3 individual ones of the array of media based upon a guaranteed bandwidth.